

REMARKS

Claims 1-7, 9, 10 and 43-50 are pending. Claim 8 has been canceled without prejudice. Applicant acknowledges that claims 45-50 were inadvertently mismarked in the Preliminary Amendment of July 15, 2008, and Applicant appreciates that the Examiner proceeded with examination.

Claims 1-10 and 43-50 stand rejected. Applicant respectfully requests reconsideration of the reject based on the following comments.

Objection to Claims

The Examiner objected to claim 8 as being a substantial duplicate of claim 1. Applicant has canceled claim 8. In view of the cancelation of claim 8, Applicant respectfully requests withdrawal of the objection to the claims. Applicant thanks the Examiner for a careful reading of the claims.

Rejection Over Kaneda et al. and Nakamura

The Examiner rejected claims 1-3, 5, 7-10, 43-45, 47, 49 and 50 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,638,662 to Kaneda et al. (Kaneda) in view of U.S. Patent 6,103,213 to Nakamura et al. (Nakamura). The Examiner cited Kaneda for its teaching relating to lithium cobalt oxides. The Examiner cited Nakamura for its teaching of "a process for producing lithium-cobalt oxide particles wherein the final product of the production process yields lithium-cobalt oxide particles that have a narrow particle size distribution and a uniform small particle size." With all due respect, there seems to be a significant misunderstanding with respect to the teachings of Nakamura. Applicant notes that Nakamura actually teaches away from Applicant's claimed invention when viewed as a whole. Applicant respectfully requests reconsideration of the rejection based on the following comments.

The Nakamura reference does teach an approach for synthesizing lithium cobalt oxide particles with uniform particle sizes, but the particle sizes are necessarily much larger than the particles claimed by Applicant. At column 4, lines 19-43, the dimensions are discussed for the cobalt oxide particles that serve as "**raw material**" for lithium cobalt oxide synthesis. The calcination treatment to form the product lithium cobalt oxide is performed following the **molding of the raw material** at heating to temperatures from 500 to 850°C. See column 5, lines 11-42. At column 5, lines 57-67, Nakamura discloses the importance of have a high compression density to ensure that "**grain growth**" is not "**insufficient**." This discussion in Nakamura **teaches away** from the average particle size of no more than 100 nm as claimed by Applicant. The particle sizes of the product lithium cobalt oxide particles from the examples are given in Tables 3 and 4. The smallest particle size is for a "comparative example" with an average particle size of 800 nm, which is still almost a factor of ten larger than the largest average particle size claimed by Applicant.

Nakamura teaches that the product lithium cobalt oxide particles should exhibit significant grain growth relative to the starting material. Nakamura exemplifies average product particle sizes of a micron or greater for their actual examples. Thus, Nakamura teaches away from Applicant's claimed particle sizes. Furthermore, Nakamura does not teach how to produce particles with the properties claimed by Applicant. It follows that Nakamura does not make up for the deficiencies of Kaneda.

The combined teachings of Kaneda and Nakamura do not place Applicant's claimed invention in the hands of the public since Nakamura teaches away from the claimed invention and since the combined teachings do not provide a reasonable expectation of success. Therefore, the combined teachings of Kaneda and Nakamura do not render Applicant's claimed invention *prima facie* obvious. Applicant respectfully requests withdrawal of the rejection of claims 1-3, 5, 7-10, 43-45, 47, 49 and 50 under 35 U.S.C. § 103(a) as being unpatentable over Kaneda in

view of Nakamura. While Applicant does not acquiesce with respect to issues relating specifically to the dependent claims, these issues are not specifically discussed since they are moot in view of the issue raised above.

Rejection of Claims 4, 6, 46 and 48

The Examiner rejected claims 4, 6, 46 and 48 under 35 U.S.C. § 103(a) as being unpatentable over Kaneda and Nakamura as applied above and further in view of U.S. patent 6,534,216B to Narukawa et al. (Narukawa). The Examiner cites Narukawa for teaching substitutions of various metals for a portion of the cobalt in lithium cobalt oxides. However, Narukawa does not make up for the deficiencies of the combined teachings of Kaneda and Nakamura with respect to the claimed invention. Applicant respectfully requests reconsideration of the rejection based on the following comments.

Narukawa does not make up for the deficiencies of Kaneda and Nakamura. In particular, see Fig. 6 of Narukawa. The average particle sizes range from about 7 microns to about 20 microns. The average particle sizes in Narukawa are almost two orders of magnitude larger than Applicant's claimed particle size, which has an upper limit of about 100 nanometers. The combined teachings of Kaneda, Nakamura and Narukawa do not teach or suggest Applicant's claimed invention relating to a particle collection with an average particle size of no more than 100 nm and high uniformity. Thus, the combined teachings of Kaneda, Nakamura and Narukawa clearly do not render Applicant's claimed invention *prima facie* obvious.

Since the combined teachings of Kaneda and Narukawa do not render Applicant's claimed invention *prima facie* obvious, Applicant respectfully requests withdrawal of the rejection of claims 4, 6, 46 and 48 under 35 U.S.C. § 103(a) as being unpatentable over Kaneda and Nakamura as applied above and further in view of Narukawa. While Applicant does not

acquiesce in the Examiner's assertions regarding the specific features of the dependent claims, these are not discussed further here due to the clear deficiencies with respect to the independent claim.

CONCLUSIONS

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,

/Peter S. Dardi/

Peter S. Dardi, Ph.D.
Registration No. 39,650

Customer No. 62274
Dardi & Associates, PLLC
US Bank Plaza, Suite 2000
220 South 6th Street
Minneapolis, Minnesota 55402
Telephone: (404) 949-5730